

idly as possible. The defects will usually have to be covered by skin grafts. Prompt operation makes all of the difference between rapid resolution of the process on the one hand and great destruction of tissue, if not metastasis and death, on the other.

A plea is therefore made for the early recognition of and prompt operation in this disease.

NEW VESTIBULAR COMPLEXES FOR LOCALIZATION OF BRAIN TUMORS *

(An analysis of 139 verified lesions)

(ABSTRACT)

LEWIS FISHER

This series comprised 65 supra-tentorial and 74 sub-tentorial lesions.

The subject is presented from six angles :

1. Findings indicative of a brain lesion, given as spontaneous vertical nystagmus; poor pelvic girdle movements; marked disproportion between nystagmus and vertigo after turning; marked disproportion in the activity or duration of the responses from the horizontal and vertical semi-circular canals of the same side, after douching; loss of nystagmus from the vertical canals, but past pointing present; perverted nystagmus from either horizontal or vertical canals after douching; vertigo, or past pointing, in the wrong direction after stimulation; dissociated movement of the two eyes after stimulation; loss of all vestibular responses after stimulation, with good hearing.

2. Abnormal responses to ear stimulation do not indicate an increase in generalized intra-cranial pressure, and conversely, an increase in the spinal manometric pressure is not always accompanied by abnormal vestibular findings.

* Delivered before the Section of Otology, February 8, 1929.

3. Findings indicative of a sub-tentorial and of a supra-tentorial lesion: patients with a sub-tentorial lesion do not become nauseated, do not vomit, nor perspire, regardless of the amount of stimulation administered. Patients with a supra-tentorial lesion are frequently quite susceptible.

4. Findings indicative of the laterality of the lesion.

5. Vestibular group-findings diagnostic for each anatomic area.

6. Differential diagnostic signs between various anatomic areas. The first step in the diagnosis is to determine whether the lesion is supra or sub-tentorial. In differentiating the various sub-tentorial lesions the cerebello-pons angle tumors present the most definite complex, namely, the loss of all responses on one side, including hearing, with a loss of the vertical semi-circular canals' function on the opposite side.

Conclusions:

1. A brain lesion usually shows abnormal vestibular test findings.

2. Generalized increased intra-cranial pressure as such cannot be diagnosed by the vestibular tests.

3. The vestibular findings indicative of the laterality of a lesion are definite and reliable, when present, but not all brain lesions exhibit these signs.

4. The vestibular tests can usually differentiate definitely between a supra and a sub-tentorial lesion.

5. Each anatomic area presents vestibular group-findings of its own.

6. While in the vast majority of cases the diagnosis of brain tumors can be made by the vestibular tests, their value would be the greatest when taken in conjunction with the general clinical findings.